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10/511,633	05/06/2005	Rolf Kawa	C 2609 PCT/US	8614
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FOX ROTHSCHILD LLP 997 Lenox Drive, Bldg. #3 Lawrenceville, NJ 08648			SULLIVAN, DANIELLE D	
			ART UNIT	PAPER NUMBER
			1617	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/511,633	Applicant(s) KAWA ET AL.	
	Examiner DANIELLE SULLIVAN	Art Unit 1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-23, 25, 27-36 and 38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-23, 25, 27-36 and 38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 21-23, 25, 27-36, 38, 42 and 43 are pending. Claims 42 and 43 were withdrawn from consideration in the restriction filed 5/13/2010. Claims 21, 28, 34 and 42 were amended and claims 24 and 37 were cancelled in the amendment filed 8/05/2010. Claims 21-23, 25, 27-36 and 38 are under examination.

Response to Arguments

Applicant's arguments, with respect to Polovsky et al. have been fully considered and are persuasive. The rejection of claims 21-23, 25, 27-36 and 38 has been withdrawn.

Applicant argued that Polovsky's disclosure is directed to alkoxyated alkyl glucosides that are cationic, not alkyl glucosides with are nonionic in view the amendment filed 8/5/2010 and that Polovsky is silent regarding polyol poly-12-hydroxystearates. This argument was found convincing.

In view of the withdrawal of Polosky and new rejection in view of Seipel is herein set forth.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 34-36 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Seipel (6,207,140).

Applicant claims a protection water-in-oil emulsion comprising: a) at least on polyol poly-12-hydroxystearate (preferably 2-10%); b) an oil component (preferably 1-20%); c) at least on surfactant selected from anionic, zwitterionic or mixtures thereof (preferably 0.5-10%); of a UV protection factor (preferably 0.5-20%); and water (preferably 30-80%), wherein component (a) enhances the foamability of said emulsion, and wherein said emulsion forms a foam when dispensed (claims 34 and 35). Claim 36 specifies (a) comprises poly (12-hydroxystearic acid) polyglycerol ester.

Seipel et al. disclose cosmetic compositions with high transparency and stability in the form of an oil-in-water microemulsion (abstract). The composition comprises 1-90% of a oil, 10-90% of emulsifiers and 10-90% uv filters (column 6, lines 8-20). The compositions comprise 1-95% water (column 5, lines 52-54). The compositions may contain co-emulsifiers selected from polyglycerol poly-12-hydroxystearate (column 6, lines 63-67). Co emulsifiers selected from polyol esters of polyglycerol poly-12-hydroxystearate range from 5-75% of the formulations (column 5, lines 9-12; column 6,

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lines 63-67). Superfatting agents serve as foam stabilizers and are preferably used in combination with polyglycerol poly-12-hydroxystearates (column 7, line 63 through column 8, line 6).

With regard to claim 34, (a) polyol poly-12-hydroxystearate being drawn the characteristic of foam enhancer. However, foamability is inherent to the claimed product. When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention but has basis for shifting the burden of proof to applicant as in In re Fitzgerald, 619 F.2d 67, 205 USPQ 594 (CCPA 1980) a 102/103 rejection is justified. See MPEP § § 2112-2112.02.

Additionally, with regard to the claim 36 being drawn to the species poly (12-hydroxystearic acid) polyglycerol ester, Seipel et al. do not specifically envisage a specific formulation comprising polyol poly-12-hydroxystearic acid, specifically poly-12-hydroxystearic acid polyglycerol ester as in claims 36, however, Superfatting agents are taught to serve as foam stabilizers which are preferably used in combination with polyglycerol poly-12-hydroxystearates. Therefore, preference is given to the selection of polyglycerol poly-12-hydroxystearates, and since foam stabilizers are used it implies that the polyglycerol poly-12-hydroxystearate formulations form foams. Since the species polyglycerol poly-12-hydroxystearate, also known as poly(12-hydroxystearic acid) polyglycerol ester, is taught by Seipel the genus of polyol poly-12-hydroxystearates is taught. When the reference teaches a small genus which places a

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claimed species in the possession of the public as in *In re Schaumann*, 572 F.2d 312, 197 USPQ 5 (CCPA1978), and the species would have been obvious even if the genus were not sufficiently small to justify a rejection under 35 U.S.C. 102. See MPEP §§ 2131.02 and 2144.08 for more information on anticipation and obviousness of species by a disclosure of a genus.

Claims 34-36 are rejected under 35 U.S.C. 103(a) as obvious over Seipel (6,207,140).

Applicant claims a protection water-in-oil emulsion comprising: a) at least on polyol poly-12-hydrostearate (preferably 2-10%); b) an oil component (preferably 1-20%); c) at least on surfactant selected from anionic, zwitterionic or mixtures thereof (preferably 0.5-10%); of a UV protection factor (preferably 0.5-20%); and water (preferably 30-80%), wherein component (a) enhances the foamability of said emulsion, and wherein said emulsion forms a foam when dispensed (claims 34 and 35). Claim 36 specifies (a) comprises poly (12-hydroxystearic acid) polyglycerol ester.

Seipel et al. disclose cosmetic compositions with high transparency and stability in the form of an oil-in-water microemulsion (abstract). The composition comprises 1-90% of a oil, 10-90% of emulsifiers and 10-90% uv filters (column 6, lines 8-20). The compositions comprise 1-95% water (column 5, lines 52-54). The compositions may contain co-emulsifiers selected from polyglycerol poly-12-hydroxystearate (column 6, lines 63-67). Co emulsifiers selected from polyol esters of polyglycerol poly-12-hydroxystearate range from 5-75% of the formulations (column 5, lines 9-12; column 6,

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lines 63-67). Superfatting agents serve as foam stabilizers and are preferably used in combination with polyglycerol poly-12-hydroxystearates (column 7, line 63 through column 8, line 6).

With regard to the claim 36 being drawn to the species poly (12-hydroxystearic acid) polyglycerol ester, Seipel et al. do not specifically envisage a specific formulation comprising polyol poly-12-hydroxystearic acid, specifically poly-12-hydroxystearic acid polyglycerol ester as in claims 36, however, Superfatting agents are taught to serve as foam stabilizers which are preferably used in combination with polyglycerol poly-12-hydroxystearates. Therefore, preference is given to the selection of polyglycerol poly-12-hydroxystearates, and since foam stabilizers are used it implies that the polyglycerol poly-12-hydroxystearate formulations form foams. Since the species polyglycerol poly-12-hydroxystearate, also known as poly(12-hydroxystearic acid) polyglycerol ester, is taught by Seipel the genus of polyol poly-12-hydroxystearates is taught.

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the teachings of Seipel et al. to further include formulating a foaming composition comprising poly-12-hydroxystearate, cocamidopropyl betaine and a sulfosuccinate. One would have been motivated to include polyglycerol poly-12-hydroxystearate, a species of polyol poly-12-hydroxystearates because Seipel teaches that superfatting agents serve as foam stabilizers and are preferably used in combination with polyglycerol poly-12-hydroxystearate. The fact that polyglycerol poly-12-hydroxystearate are improve foams stability implies that the component enhances the foamability of the formulation.

Response to Arguments

In the instant case, Applicant claims a new inherent property, foamability of polyol poly-12-hydroxystearate, as the inventive concept of the invention, which is not a basis for patentability. In view of Atlas Powder Co. v. Ireco Inc., 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999)), "the discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer".

Claim 34 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seipel (6,207,140) in combination with Ansmann et al. (US 6,280,712).

Applicant's Invention

Applicant claims a protection water-in-oil emulsion comprising: a) at least on polyol poly-12-hydroxystearate (preferably 2-10%), preferably poly(12-hydroxystearic acid)polyglycerol ester; b) an oil component, particularly dialkyl carbonate (preferably 1-20%); c) at least on surfactant selected from anionic, zwitterionic or mixtures thereof, particularly a mixture of Cocamidopropylbetaine and a sulfosuccinate (preferably 0.5-10%); of a UV protection factor (preferably 0.5-20%); and water (preferably 30-80%), wherein component (a) enhances the foamability of said emulsion, and wherein said emulsion forms a foam when dispensed (claims 34 and 38).

Determination of the scope and the content of the prior art

(MPEP 2141.01)

Seipel et al. disclose cosmetic compositions with high transparency and stability in the form of an oil-in-water microemulsion (abstract). The composition comprises 1-90% of a oil, 10-90% of emulsifiers and 10-90% uv filters (column 6, lines 8-20). The compositions comprise 1-95% water (column 5, lines 52-54). The compositions may contain co-emulsifiers selected from polyglycerol poly-12-hydroxystearate (column 6, lines 63-67). Co emulsifiers selected from polyol esters of polyglycerol poly-12-hydroxystearate range from 5-75% of the formulations (column 5, lines 9-12; column 6, lines 63-67). Superfatting agents serve as foam stabilizers and are preferably used in combination with polyglycerol poly-12-hydroxystearates (column 7, line 63 through column 8, line 6). Zwitterionic surfactants preferred are cocamidopropyl betaine, the limitation of claim 38 (column 7, lines 30-44). Anionic surfactants include

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sulfosuccinates and the zwitterionic surfactant cocoamidopropyl betaine is preferred, limitation of claim 38 (column 6, lines 21-29; column 7, line 44).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

Seipel et al. do not teach the oil component is dialkyl carbonate. It is for this reason that Ansmann et al. is joined.

Ansmann et al. teach a process for enhancing the effectiveness of a sunscreen's UV filter by using dialkyl ethers (abstract, column 1, lines 37-46). The dialkyl carbonates may be used in a quantity of 1-30% by weight (column 2, lines 11-14). The compositions may contain mild surfactants, e.g., dialkylsulfosuccinates and cocamidopropyl betaine (column 4, line 15; column 5, line 55), oil components, emulsifiers, such as polyol esters of poly-12-hydroxystearate and alkyl glucosides (column 4, lines 59-62; column 5, line 3) and super-fatting agents to stabilize foams (column 4, lines 5-12; column 6, lines 8 and 12). The alkyl glucosides are taught as equivalents of polyglycerol poly-12-hydroxystearates which may be used in combination. The total percentage of additives may be from 1 to 50% by weight, based on the particular formulation. Water is added to bring the composition to 100 (Table 2, line 64).

Finding of prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Seipel et al. and Ansmann et al. to further include dialkyl carbonates as the oil component. One would have been motivated to include dialkyl carbonates because they enhance the effectiveness of sunscreens as taught by Ansmann et al.

Claims 21-23 and 27-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seipel (6,207,140) in further view of Van der Heijden et al. (WO 00/78629).

Applicant's Invention

Applicant claims a protection water-in-oil emulsion comprising: a) at least on polyol poly-12-hydrostearate (preferably 2-10%); b) an oil component (preferably 1-20%); c) at least on surfactant selected from anionic, zwitterionic or mixtures thereof (preferably 0.5-10%); of a UV protection factor (preferably 0.5-20%); and water (preferably 30-80%), wherein component (a) enhances the foamability of said emulsion, and wherein said emulsion forms a foam when dispensed in a dispensing system(claims 21 and 22). The dispenser disposes the emulsion with a compressed gas by a pump mechanism combining the emulsion with air to form and dispense foam (claim 27 and 28). The air to liquid mixing ratio is from 5:1 to 30:1 and the shot volume is from 0.1 to 1 ml liquid per shot (claims 29 and 30). Claims 31-33 detail properties of a outlet passage, air inlet and an air pump chamber. Claim 23 specifies (a) comprises poly (12-hydroxystearic acid) polyglycerol ester.

Determination of the scope and the content of the prior art
(MPEP 2141.01)

The teachings of Seipel et al. are set forth in the above 103 rejection.

Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)

Seipel et al. do not teach a specific foam dispensing mechanism, detail the air to liquid mixing ratio is from 5:1 to 30:1 and the shot volume is from 0.1 to 1 ml liquid per shot or properties of a outlet passage, air inlet and an air pump chamber as in claims 27-33. It is for this reason that Van der Heijden et al. is joined.

Van der Heijden et al. teach the foam dispenser claimed as applicable in the present invention on page 27, lines 14-17 or the present application. The dispenser preferably comprises air pump with an air inlet and outlet (page 4, lines 28-29). The mixing ratio between air and liquid is taught as essential (page 4, line 37 through page 5, line 2). The dispenser is taught as useful for dispensing cosmetics (page 1, lines 19-29). It is advantageous to utilize the dispenser for foam compositions because it prevents water from entering the dispensing assembly and contaminating the formulation (page 3, lines 18-20). Van der Heijden do not teach specific ratio of air to liquid or shot volume produced. However, one of ordinary skill would be able to optimize the ranges because the problem to be solved is the same, producing a foam without the disruption of the mixing ratio.

Finding of prima facie obviousness
Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Seipel et al., and Van der Heijden et al. and further include a system of dispensing the foam. One would have been motivated to use the foam dispenser taught by Van der Heijden et al. to provide a pumpable formulation to allow for the ease in application by pumping the formulation. Further, the foam dispenser, as taught by Van der Heijden et al., protects the ingredients in the water-in-oil emulsion from contamination.

Claims 21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seipel (6,207,140) in combination with Ansmann et al. (US 6,280,712) in further view of Van der Heijden et al. (WO 00/78629).

Applicant's Invention

Applicant claims a protection water-in-oil emulsion comprising: a) at least on polyol poly-12-hydrostearate (preferably 2-10%); b) an oil component (preferably 1-20% dialkyl carbonate); c) at least on surfactant selected from anionic, zwitterionic or mixtures thereof (preferably 0.5-10% of a mixture of Cocamidopropylbetaine and a sulfosuccinate); of a UV protection factor (preferably 0.5-20%); and water (preferably 30-80%), wherein component (a) enhances the foamability of said emulsion, and wherein said emulsion forms a foam when dispensed in a dispensing system. The dispenser disposes the emulsion with a compressed gas by a pump mechanism combining the emulsion with air to form and dispense foam. Claim 25 specifies (a) comprises poly (12-hydroxystearic acid) polyglycerol ester and (b) is dialkyl carbonate.

Determination of the scope and the content of the prior art
(MPEP 2141.01)

Seipel et al. and Ansmann et al. teach a foamable composition with dialkyl carbonate as set forth in the above 103 rejection.

Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)

Seipel et al. and Ansmann et al. do not teach a specific foam mechanism. It is for this reason that Van der Heijden et al. is joined.

Van der Heijden et al. teach the foam dispenser claimed as applicable in the invention (see specification page 27, lines 14-17). The dispenser is taught as useful for dispensing cosmetics (page 1, lines 19-29). It is advantageous to utilize the dispenser for foam compositions because it prevents water from entering the dispensing assembly and contaminating the formulation (page 3, lines 18-20).

Finding of prima facie obviousness
Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Seipel et al., Ansmann et al. and Van der Heijden et al. and further include a system of dispensing the foam. One would have been motivated to use the foam dispenser taught by Van der Heijden et al. to provide a pumpable formulation to allow for the ease in application by pumping the formulation.

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Further, the foam dispenser, as taught by Van der Heijden et al., protects the ingredients in the water-in-oil emulsion from contamination.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIELLE SULLIVAN whose telephone number is (571)270-3285. The examiner can normally be reached on 7:30 AM - 5:00 PM Mon-Thur EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fereydoun Sajjadi can be reached on (571) 272-3311. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Danielle Sullivan

Patent Examiner

Art Unit 1617

/Joanne Hama/

Primary Examiner, Art Unit 1632